

# W5YI

## National Volunteer Examiner Coordinator REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

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### Amateur Petitions for Secondary Ham Communications

The previous issue of W5YI Report revealed that the FCC is contemplating changing Rule 97.113, "Prohibited Transmissions." The changes, as suggested by Private Radio Bureau chief *Ralph Haller/N4RH*, would greatly simplify this rule so that regular business affairs could be conducted on amateur frequencies on a "secondary" - no interference - basis.

Related to the possible changes are the petitions filed that would make the originator of a packet message responsible for the message's compliance with 97.113. The petitions were filed after the FCC cited several amateurs for retransmitting anti-war messages that contained fund raising 900 phone numbers. FCC staff members have said that the packet petitions could be combined into the business rule changes. That is because if the changes took place, then fund-raising and other business messages that are now prohibited would be permitted.

FCC Personal Radio Branch chief *John Johnston/W3BE* said it was doubtful that an official release - a *Notice of Proposed Rulemaking* or a *Notice of Inquiry*, for example - would happen before the end of 1991. The FCC could go forward on its own motion, but Johnston pointed out that the FCC is waiting on the filing of petitions from the amateur community.

At least one petition has been filed with the Federal Communications Commission seeking implementation of the FCC's new suggested three

category concept of Amateur Radio communications. Currently Section §97.101 provides for only two types: emergency and "all other" permitted Amateur communications.

FCC Private Radio Bureau Chief *Ralph Haller, N4RH*, startled listeners during a speech he delivered at the ARRL National Convention held in Saginaw, Michigan. Haller said he was receptive to permitting a third type of non-amateur communications which would be allowed when the ham bands were not being used for normal Amateur communications.

His proposal was in response to numerous requests from the ham community to broaden the range of Amateur communications. These included the use of ham radio in the classroom, for coordinating public events such as the Rose Bowl parade and Alaskan Iditarod dog sled race, routine involvement with the National Weather Service, public safety and other local, state and federal agencies ...and providing information to the news media. Haller said that Amateur Radio might even be used for personal business "...including ordering pizzas"

Earlier this year, the FCC in Anchorage, Alaska, published a news bulletin advising the Amateur community that they monitored several violations of the no-business rule at last year's Iditarod race. No violation notices were issued at that time. The FCC went on to say:

"...the Amateur Service exists for the purpose of

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self-training, intercommunications and technical investigation carried out by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest. It is the Commission's basic premise that the Amateur Service has its own objectives and is not intended to be used as an alternative to other radio services, and this has been incorporated into the rules. The Amateur Service is a voluntary, noncommercial communication service.

"The Amateur service frequencies should not be exploited by those who would use them as an alternative to the land mobile, broadcast, maritime or common carrier radio services. ...avoiding the cost of obtaining communications in the proper radio service is not a valid basis for using Amateur facilities at a public gathering. ...We must reemphasize that while the Amateur Radio Service may provide communications for the public's safe observation and participation in public gatherings, and can provide communications for the immediate safety of human life and protection of property, it cannot be used as a substitute for other radio services."

## New category of Amateur communications

To accommodate the steady stream of requests from Amateurs, Haller suggested a new lineup of Amateur Service frequency usage in the following order; Priority, Primary and then Secondary. Urgent emergency communications would continue to take precedence. Normal Amateur operations as outlined in §97.1 would be next. All other non-Amateur communications could be accommodated on the ham bands on a secondary non-interference basis to Priority and Primary usage.

## Amateur petitions for secondary usage

On September 27th, **Michael R. Reynolds, W0KIE** of Tulsa, Oklahoma, formally requested that the FCC permit additional non interfering secondary Amateur communications. Reynolds, a Certified Public Accountant, specifically asked for permission to retransmit all NASA audio and video broadcasts related to space shuttle and exploration activities. Present rules allow only communications between the space shuttle and earth stations on government frequencies.

"A large number of radio amateurs in our area are aware that NASA also makes available technical discussion about shuttle operations and space exploration activities to interested parties. Amateurs have asked if there is any way they can also receive these communications via Amateur Radio retransmission as well.

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"Based on research and contacts in our area we determined that there is no availability of requested NASA space shuttle technical and space exploration communications to 99% of the radio amateur population in our area. The remaining 1% own their own satellite receiving system.

"Previous correspondence from the Private Radio Bureau to me indicated that the FCC's purpose for Amateur Radio is for "radio experimentation" and not for NASA retransmissions. Let me suggest to the FCC that at least in N.E. Oklahoma nearly every Radio Amateur I know operates NOT for experimentation but for (1) the opportunity for having fun communicating with old and new friends, (2) being able to volunteer for various public service activities, both emergency and non-emergency, (3) to receive Amateur Radio information bulletins from Newsline, RAIN and IARN and (4) to receive NASA space shuttle retransmissions on Amateur Radio.

"Radio Amateurs, as noted by Ralph Haller, at the ARRL National Convention on August 24, 1991, among other things, would also like to receive retransmissions by fellow amateurs of NOAA weather updates, WWV time signals, etc. Fortunately, in our area in the U.S. there are still Amateur Radio frequencies available for new additional non interfering secondary use by Amateur operators.

"I request the FCC Personal (sic) Radio Bureau move this petition to the status of acceptance of public comment in a timely manner. /s/ Michael R. Reynolds.

## SECONDARY AMATEUR COMMUNICATIONS

Most amateurs are familiar with the name of Ray Kowalski. Ray was the FCC's Special Services Division Chief from 1982 to 1988. That's the section that oversees the Personal Radio Branch. The Amateur Service falls under Personal Radio. The chain of command at the FCC in Washington works something like this: Branch heads report to Division leadership. **Johnny Johnston, W3BE**, Chief of the Personal Radio Branch, answers to the Special Services Division. The (Part 87) Aviation and (Part 80) Maritime Radio Services also fall under the Special Services Division. Division chiefs report to Bureau management.

**Ralph Haller, N4RH**, a former broadcast engineer for a Kansas radio station and FCC engineer was promoted to head up the FCC's Private Radio Bureau in December 1987. Kowalski was moved up to the Acting Deputy PRB Chief slot. Each had nearly two decades of FCC experience. It was generally thought that Haller and Kowalski would be the new bureau team. Haller had the engineering background, Kowalski was a lawyer.

to: W5YI-VEC, P.O. Box #565101; Dallas, Texas 75256-5101. A certificate (optional) is also available for \$1.00. Details and accreditation materials will be sent to you in about two weeks.

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Kowalski is more or less considered the father of the volunteer examiner system. The VEC System was conceived and implemented during his tenure. He also went through the stormy 1982 Docket 20282 'No-code' non-event. While he didn't feel the code should be totally abandoned, he argued for a codeless license ...comparing manual Morse code and code keyboard/readers to computers. I remember him saying "You don't have to know a lick of programming in order to be able to skillfully and beneficially use a computer." Although not implemented until after he left, both he and Johnny Johnston were heavily involved in the total rewrite of the Part 97 Rules.

Ray always had time for us. It came as a complete surprise when he told me he was leaving the Commission at year end (1987.) Ray had been offered an excellent opportunity with the Washington, DC communications law firm of Blooston & Mordkofsky. Several amateur radio firms and organizations took advantage of legal expertise (including us, The W5YI Group, Inc.) I consider Ray more than a counselor, he is a friend ...and a true champion of ham radio.

Without prior discussion, Ray wrote me a couple of weeks ago about the Haller proposal. I always listen very carefully to what he says. Ray told me that the secondary communications concept "...is an issue I feel very strongly about and sometimes deeply held principles take precedence over the opportunity to make a few bucks." Here is his unedited letter to me which he gave me permission to print:

Mr. Fred Maia, Editor  
W5YI Report  
Post Office Box 565101  
Dallas, Texas 75365-5101

September 23 1991

Dear Fred,

Although it is now nearly four years since I left the FCC, I still like to keep abreast of developments in the Amateur Radio Service. From time to time since my departure for the private practice of law, I've been able to assist you and others who have retained my services in matters relating to ham radio.

I recently learned of a proposal that was floated by Ralph Haller, Chief of the FCC's Private Radio Bureau, at the ARRL National Convention in Saginaw, Michigan on August 24, 1991. Although I have not seen widespread discussion of this proposal, I, for one, view it with alarm. In my view, this proposal contains within it the seeds of destruction of the Amateur Radio Service as we know it.

So let me do what I can to get the dialogue going by telling you why I feel the way I do. Undoubtedly, this will be viewed by most of your readers as a contrarian position.

There presently exists in the Amateur Radio Service a tension among the principles that dictate the basis and purpose of the Amateur rules. These principles are stated in the very first Amateur rule, Section 97.1 of the FCC's rules. These principles declare that the Amateur Service is at once a hobby, a training ground, a medium of international goodwill, and a source of voluntary noncommercial communications, particularly emergency communications.

At times, the implementation of these principles results in conflicts among users as well as among the regulations themselves. This is why I say there is a tension among them. But it is a healthy tension, one that reflects the living and vibrant nature of Amateur radio. The forces favoring one principle may be strengthened by events or fashions of the day, but they never get too far before the forces favoring the other principles combine to rein them in and keep the system in equilibrium.

Mr. Haller, however, has made a proposal that will upset the balance. If his proposal becomes law, the voluntary non-commercial communications component would be expanded. Based on my experience, both in and out of government, this expanded component would quickly overwhelm the rest of Amateur Radio.

Mr. Haller has proposed that amateur radio frequencies, to the extent that they have EXCESS CAPACITY, be used to support non-amateur communications on a SECONDARY basis and WITHOUT COMPENSATION.

Before I go much farther, let me say that Ralph Haller and I are well acquainted. We worked together for many years at the FCC. I believe I know Ralph and I believe he places great value on the Amateur Radio Service and its licensees. Thus I do not believe that he would deliberately make any suggestion that would not be in the best interests of the Service. In fact, I could almost believe he made this suggestion with tongue in cheek, as a way to show the incessant stream of petitioners for this or that exemption from the "no business communications" rule (Section 97.113) the logical outcome of their petitions. However, since he made the suggestion at an FCC Forum, I must conclude he is serious.

Mr. Haller envisions amending the Amateur rules to permit amateurs to provide communications assistance to public safety agencies, charitable organizations, schools, news media, governmental agencies and others. Think of it: you could set up and run communications for parades and marathons; conduct club business; even order a pizza on your 2m autopatch, guilt free! As long as the communications made use of excess capacity on Amateur spectrum and did not interfere with the traditional hobby-type and emergency (i.e. disaster, safety of life, protection of property) communications and as long as you did not get paid for it, it would be legal.

Judging from the number of requests for waiver of the no-business communications rule I saw when I was at the FCC, I would have to say that this proposal would have a seductive

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allure for many amateurs. Most amateurs I have met are anxious to donate their time and communications savvy to causes like those mentioned above. (Although some just get an emotional payoff out of playing the role of communicator.) So I don't have to tell you all of the good things that could come out of a proposal like this. But at what price? Like the Sirens' song, this proposal must be resisted, for in this most appealing direction lies shipwreck.

First, exactly what is "excess capacity?" I take the term to mean that the Amateurs have more spectrum than they can use for normal Amateur communications either now or in the foreseeable future. Mr. Haller has taken the existence of excess capacity as a given. Is this point conceded by the Amateur Community? If so, it is a dear price to pay in exchange for the weakening of the no-business communications rule.

The last time the FCC perceived that the Amateur Service had excess capacity, they removed 2 megahertz of that capacity in General Docket 87-14. Now it appears that the FCC is not even waiting for a spectrum re-allocation proceeding. Rather than moving the excess spectrum to other radio services, it will simply allow the incursion of outsiders into the Amateur Service. Believe me, Fred, once this camel's nose gets under the tent, there's no getting rid of it and there's no stopping the eventual appearance of the head, neck and shoulders.

And who are these outsiders? In almost every situation I can think of, they are groups who already have spectrum at their disposal. The federal government has so much spectrum, there are bills in Congress to pry out 200 megahertz of it and distribute it to non-government users. Local governments and public safety entities are eligible in their own land mobile services. Broadcasters and news media have their own relay frequencies. Even ordinary businesses have vast blocks of spectrum available.

So why is there so much demand to use Amateur frequencies? Because it's cheap to do, primarily. Ham gear is as good as (if not better than) most land mobile equipment on the market. Yet it is available at a fraction of the cost. Also there are no pesky air time charges for using ham radio, they way there are with cellular calls. Finally, the licensing arrangements are more flexible: all you need is your "house ham" to provide the call sign and you're ready to go! These interests are only too willing to take advantage of the good nature and general willingness of hams to be of service whenever they can. They have found a way around a shortage of funds or an internal bureaucracy. The hams, for their part, think they are helping a worthy cause. But if you look deeper, you see that they are subsidizing an effort that could, if it needed to, provide its own communications.

Next, what about "secondary" communications? This is a term of art that means the communications may not cause harmful interference to communications that are "primary" in the band and are not protected from harmful interference from

those primary communications. (See Section 2.104(d)(4) of the FCC's rules.) This is a nice concept, but it is difficult to enforce. As a practical matter, there are no communications police readily available to protect the rights of the primary communicators in any given instance. In other words, the protection of traditional amateur communications achieved by relegating non-amateur communications to secondary status is largely illusory. It is much like saying cellular communications are private, because there is a law against monitoring them.

Finally, let me see if I have this straight: the Amateurs would let everybody else use their frequencies, even for commercial, profitable purposes such as broadcasting, but what makes it legal is that the Amateurs will not receive any monetary compensation. I would make this deal every day for my land mobile clients, if I could! Spectrum is so scarce, we do not care where it comes from or on what basis. And the price is right.

Undoubtedly many good causes will come forward in favor of Mr. Haller's idea. The problem is that there is no way to draw the line and allow only the "good causes" to take advantage of relaxed no-business communications rules. If one ham can coordinate a parade, then another ham can coordinate a professional golf tournament. If one ham can assist police patrols, another ham can coordinate plant security. If one ham can order a pizza on the way home from the kids' soccer game, another ham can check for messages on the way back from a sales call. In short, you cannot get just a little bit pregnant.

The flexibility already contained in rule Section 97.113 and the entire Subpart E of the FCC's rules, which is devoted to emergency communications, is already very broad. Parades, races, marathons and other public gatherings already have relief. So do swap meets and news events. There is even an exemption for space shuttle communications. These rules are flexible enough to allow most of the worthwhile communications that hams are interested in providing. The wholesale abolition of the business barrier is as bad as the wholesale prohibition of business communications, which, as we can see, is not as strict as Mr. Haller makes it out to be.

Massive changes are afoot in the world of two-way communications. Mr. Haller's land mobile staff just initiated PR Docket 91-170, the so-called "spectrum refarming" proceeding, which has the potential to completely revise the land mobile communications regulatory framework in order to free up spectrum to support developing technologies. Do you think Mr. Haller's idea to use ham radio to support business communications is coincidence? Politically, this should be a time of spectrum vigilance for Trojan horse proposals. If there is excess capacity on the ham bands, the service needs to fill that capacity with more hams, not business users. Because, Fred, there are more of them than there are of you. Think about it.

Very truly yours,  
/s/ Raymond A. Kowalski

THE HAM HANDBOOK - Now Obtain Your Amateur Radio License Without Taking a Morse Code Test. Contains all possible tests at your IBM compatible keyboard. Study all 1,000 questions in sample ham radio mode.

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## Novice Enhancement Versus Codeless Technician

The Commission enhanced the privileges of the Novice Class effective March 21, 1987. For the first time, beginners would be allowed to operate in the voice mode in the ten meter (28.3-28.5 MHz) and through VHF/UHF repeaters (at 222.1-223.91 MHz and 1270-1295 MHz.)

There were over 9,000 Novice licenses issued in April and May of 1987. As it turned out, however, applicants were merely rushing to take the less difficult 25 question Novice examination before it was increased in number and difficulty to 30 questions.

Most of the Novice operator licenses issued in April and May 1987 represented applicants who took the 25 question written test before March 21st. After the initial surge, the number of newcomers to the hobby grew at a substantially lesser rate. Here are the figures:

<u>Class</u>		<u>Newcomers to the Amateur Radio Service</u>						
<u>1987</u>		<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Total</u>
Nov	736	2850	6406	1603	741	721		13057
Tech	46	63	278	186	107	164		844
Other	13	37	113	61	22	33		279
Total	795	2950	6797	1850	870	918		14180
		<u>[1986 = 11,539]</u>						<u>Increase over prior year: +22.9%</u>
<u>1988</u>		<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Total</u>
Nov	2407	1996	2714	1284	1643	1128		11272
Tech	251	168	233	186	172	182		1192
Other	75	31	55	24	27	37		249
Total	2733	2195	3002	1494	1842	1347		12613
		<u>Decrease over prior year: (-11.1%)</u>						
<u>1989</u>		<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Total</u>
Nov	1933	2512	2869	1805	1301	1288		11708
Tech	181	255	356	176	251	159		1378
Other	33	54	77	22	49	41		276
Total	2147	2821	3302	2003	1601	1488		13362
		<u>Increase over prior year: + 5.9%</u>						
<u>1990</u>		<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Total</u>
Nov	2466	2368	3875	1724	1665	893		12991
Tech	205	239	359	214	269	158		1444
Other	56	51	50	46	69	38		310
Total	2727	2658	4284	1984	2003	1089		14745
		<u>Increase over prior year: +10.4%</u>						
<u>1991</u>		<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Total</u>
Nov	1734	2651	1801	1088	1662	872		9808
Tech	882	3025	2858	2112	2932	3180		14989
Other	40	73	55	31	82	69		350
Total	2656	5749	4714	3231	4676	4121		25147
		<u>Increase over prior year: +70.6%</u>						

The Codeless Technician Class took effect on Feb. 14, 1991; the first license issued on March 12th. Since then, the number of first time licensed amateurs has increased by more than 70%. Most are entering ham radio at the no-code Tech level ...and so far, unlike "Novice Enhancement," shows no sign of weakening!

[Source: FCC Licensing Facility, Gettysburg, Pennsylvania]

## AMATEUR RADIO CALL SIGNS

...issued as of the first of August 1991:

<u>Radio District</u>	<u>Gp."A" Extra</u>	<u>Gp."B" Advan.</u>	<u>Gp."C" Tech/Gen</u>	<u>Gp."D" Novice</u>
0 (*)	AAØGD	KFØUI	NØPMG	KBØJOH
1	WW1O	KD1DT	N1KEW	KA1ZHM
2 (*)	AA2GP	KF2EK	N2OAC	KB2NQM
3	WR3V	KD3YY	N3KOS	KA3ZKK
4 (*)	AC4JV	KO4KJ	(***)	KD4FGV
5 (*)	AB5BF	KI5UD	N5WLT	KB5QKB
6 (*)	AB6FQ	KM6JC	(***)	KD6BCK
7 (*)	AA7KO	KG7UM	N7UDT	KB7ODE
8 (*)	AA8FA	KF8PR	N8QFO	KB8NBD
9	AA9BW	KF9FW	N9MSH	KB9HGI
N.Mariana Is.	AHØK	AHØAH	KHØAN	WHØAAQ
Guam	KH2T	AH2CN	KH2FK	WH2AMU
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii	(**)	AH6LK	WH6CP	WH6COI
Kure Is.			KH7AA	
Amer. Samoa	AH8D	AH8AE	KH8AI	WH8ABA
Wake W.Peale	AH9A	AH9AD	KH9AE	WH9AAH
Alaska	(**)	AL7NN	NL7ZJ	WL7CCX
Virgin Is.	NP2S	KP2BZ	NP2ER	WP2AHL
Puerto Rico	(**)	KP4SK	(***)	WP4KNN

CALL SIGN WATCH: \* = All 2-by-1 "W" prefixed call signs have been assigned in every radio district except the 1st and 3rd call sign area. Two-by-two format call signs from the AA-AK block are assigned to Extra Class amateurs when 2-by-1's run out! (AL prefixes are assigned to Alaska. AM-AZ prefixes are ITU allocated to other countries.)

\*\* = All Group A (2-by-1) format call signs have been assigned in Hawaii, Alaska and Puerto Rico. Group "B" (2-by-2) format call signs are assigned to Extra Class when Group "A" are depleted.

\*\*\* = Group "C" (primarily 1-by-3) call signs have now run out in the 4th, 6th and Puerto Rico call districts. According to the rules (adopted by the Commission Feb. 8, 1978, Docket No. 21135), Technician/General class amateurs are next assigned Group "D" (2-by-3 format) call signs when all Group "C" have been assigned. Upgrading Novices holding a 2-by-3 format call sign in the 4th, 6th and Puerto Rico call areas will no longer be able to request a Group "C" call and will be automatically assigned another more recent 2-by-3 format call sign if they do! Contrary to the wishes of many amateurs, the FCC has said they will not be going back and reassigning unused "K" and "W" 1-by-3 format call signs.

[Source: FCC Licensing Facility, Gettysburg, Pennsylvania]

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## AUGUST VE PROGRAM STATISTICS

<u>August</u> <u>No. VEC's</u>	<u>1989</u> <u>*18</u>	<u>1990</u> <u>*18</u>	<u>1991</u> <u>*18</u>
<b>Testing Sessions</b>	<b>410</b>	<b>473</b>	<b>669</b>
VEC	1989	1990	1991
ARRL	36.1%	38.1%	43.2%
W5YI	38.3	41.6	38.4
CAVEC	7.1	7.0	5.7
DeVRY	7.1	3.6	3.6
Others (14)	11.4	9.7	9.1
<b>Year-to-Date Sessions</b>	<b>3572</b>	<b>4019</b>	<b>5096</b>
<b>Elements Administ.</b>	<b>6712</b>	<b>7779</b>	<b>13606</b>
VEC	1989	1990	1991
ARRL	41.1%	41.9%	46.6%
W5YI	30.2	33.2	28.3
CAVEC	8.6	10.6	9.5
DeVRY	4.1	2.7	3.1
Others (14)	16.0	11.6	12.5
<b>Year-to-Date Elements</b>	<b>65641</b>	<b>71677</b>	<b>111205</b>
<b>Applicants Tested</b>	<b>4054</b>	<b>4733</b>	<b>8240</b>
VEC	1989	1990	1991
ARRL	41.4%	41.0%	46.4%
W5YI	30.1	34.8	29.0
CAVEC	7.6	9.4	8.6
DeVRY	4.5	2.8	3.7
Others (14)	16.4	12.0	12.3
<b>Year-to-Date Tested</b>	<b>39082</b>	<b>43680</b>	<b>66911</b>
<b>August</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>
Pass Rate - All	61.1%	60.5%	65.9%
Applicants/Session	9.9	10.0	12.3
Elements/Applicant	1.7	1.6	1.7
Sessions Per VEC	22.8 (*)	26.3	37.2
<b>Administrative Errors by VE's/VEC's</b>			
<b>August</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>
Defect. Applications	0.8%	0.8%	0.5%
Late Filed Sessions	1.7%	1.7%	4.5%
Defective Reports	1.0%	1.0%	0.1%

(\*) Note: The FCC previously considered ARRL, W5YI and DeVry to be 13 VEC's each since VEC's initially were appointed on a regional basis. Since any VEC may now coordinate examinations in any region, the FCC reduced the number of VEC Regions (62) to VEC Organizations (18.) We have adjusted 1989 figures to reflect this change. There have now been more applicants and examination elements administered through August 1991 than all of last year!

[Source: Personal Radio Branch/FCC; Washington, D.C.]

## AUGUST AMATEUR LICENSING STATISTICS

<u>August</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
New				
Amateurs:	1386	1488	1089	4121
<u>Upgrading:</u>				
Novices	1260	1190	1209	1445
Technicians	389	391	503	905
Generals	304	272	334	520
Advanced	250	182	232	406
<b>Total:</b>	<b>2203</b>	<b>2035</b>	<b>2278</b>	<b>3276</b>
<u>Renewals: (*)</u>				
Total Renew:	3220	* 214	* 40	* 52
Novices	283	* 31	* 10	* 2
<u>Purged:</u>				
Total Dropped:	1450	* 1835	* 1507	* 15
Novices	577	* 460	* 15	* 1
<u>Census:</u>				
Indiv. Oper.	436705	463172	491670	529680
Change/Year	+7027	+26467*	+28498*	+38018*
<b>Individual Operators by Class: (and % of total)</b>				
<b>Extra</b>	<b>Advan.</b>	<b>General</b>	<b>Technic.</b>	<b>Novice</b>
<b>Total:</b>				
<b>August 1988</b>				
45909	98282	113068	98944	80502
10.5%	22.5%	25.9%	22.7%	18.4%
<b>August 1989 (*)</b>				
49275	101311	116289	111708	84589
10.6%	21.9%	25.1%	24.1%	18.3%
<b>August 1990 (*)</b>				
52700	104222	119038	124778	90932
10.7%	21.2%	24.2%	25.4%	18.5%
<b>August 1991 (*)</b>				
56242	106990	121832	148229	96387
10.6%	20.2%	23.0%	28.0%	18.2%
Club/				
RACES &	(1988)	(1989)	(1990)	(1991)
Military:	2319	2472	2444	2431
<b>Total Active:</b>	<b>439024</b>	<b>465644</b>	<b>494114</b>	<b>532111</b>
% Increase	+1.6%	+6.1%	+6.1%*	*+7.7%*

### (\*) NOTE:

The number of amateurs in 1989, 1990 and 1991 is not comparable with prior years. Due to the implementation of the 10-year term license in 1984, amateurs who would ordinarily be dropping out of the Amateur Service between 1989 and 1993 by not renewing will be carried on the amateur roles for another five years before being purged from the FCC's data base. This has the effect of overstating the ham census between 1989 and 1991 since the records of silent keys and non-renewals will not be deleted. The fastest growing ham class is the Technician with 72.3% more Techs than just five years ago! (1986 = 86,025)

[Source: FCC Licensing Facility, Gettysburg, PA]

# W5YI REPORT

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## W5YI-VEC DISACCREDITS NINE EXAMINERS

The W5YI-VEC has separated nine of its Extra Class volunteer examiners from its testing program and invalidated three testing sessions involving some thirty-five applicants. The test sessions in question allegedly took place at Marina Del Rey, Mar Vista and Venice, California during the months of August and September.

This action results from examinations administered in conjunction with the California Amateur Radio School, operated by *Sandra V. Crane, N6TFO* of Marina Del Rey and a teacher/employee, *Charles Pascal, WB6CIY* of Culver City, California.

Pascal was separated as a W5YI-VEC Contact Volunteer Examiner in 1986 when there was a question as to whether his PNP Amateur Radio School might be a profit making venture. His request to become a VEC in 1988 was denied by the Commission and a 1989 *Freedom of Information Act* request for related documents was only partially granted by the FCC.

Sandra Crane was discredited as a volunteer examiner last May after it was concluded that the reported \$150.00 tuition charged at the California Amateur Radio School exceeded out-of-pocket costs. Part §97.515 prohibits volunteer examiners from having significant business interests in amateur radio license preparation. Crane responded by stating her radio school was a "hobby" and not a business.

At that time, the W5YI-VEC required volunteer examiners not associated with the school to conduct the testing which would not be known to the school. Contrary to these instructions, Sandra Crane and Charles Pascal continued to participate in the examining process using VE's not connected with the school.

It is charged that the written and telegraphy examinations were apparently known to the California Amateur Radio School beforehand and their teaching specifically keyed on this material. Students reportedly were advised in advance that the content of the telegraphy examinations would consist of one of two predetermined texts.

It is now the policy of the W5YI-VEC to not coordinate any amateur radio operator license testing of the California Amateur Radio School of Marina Del Rey, California. The matter has been turned over to the Federal Communications Commission for any necessary enforcement action.

## RULES CHANGES FOR DIGITAL VOICE SOUGHT

*Steven R. Sampson/N50WK* of Moore, Oklahoma petitioned the FCC on September 5 to permit time-division multiple access technology (TDMA) in Amateur Radio.

He based his petition on the concept known as *Motorola Integrated Radio System* (MIRS), which that company announced a week earlier as an advanced, spectrum-efficient approach to two-way mobile radio.

TDMA is one of three principal methods now favored for obtaining more capacity in mobile radio communications. TDMA divides the available bandwidth into segments of time rather than frequency. Each communication is assigned a time slot. In the Motorola MIRS system, up to 6 subscribers (6 slots) can share a single channel. MIRS uses a multi-level modulation scheme called M-16QAM to convey 64 kbps of digital information over a 25 kHz channel.

The switching of time slots happens so rapidly that the voice communication is not disturbed. (Packet radio could also be considered a form of time-division, as multiple packet stations can operate on the same frequency. Packets that collide are retransmitted.)

TDMA has been selected as the standard for next-generation cellular telephone service in the U.S. and other countries. The MIRS system will be purchased by Fleet Call to establish its Enhanced Specialized Mobile Radio (ESMR) system for dispatching and mobile telephone service. The enhanced capacity available from MIRS-based ESMR has led many observers to include that ESMR will compete with cellular telephone service. The specific rules changes N50WK requests include:

### 1. Change Section §97.3(c)(5) as follows:

Phone. Speech and other sound emissions having designators with A, C, D, F, G, H, J or R as the first symbol; 1, 2, or 3 as the second symbol; E as the third symbol. Also speech emissions having B, or F as the first symbol; 7, 8, or 9 as the second symbol; E as the third symbol. MCW for the purpose of performing the station identification procedure, or for providing telegraphy practice interspersed with speech. Incidental tones for the purpose of selective calling or alerting or to control the level of a demodulated signal may also be considered phone.

### 2. Change Section §97.109(e) as follows:

No station may be automatically controlled while transmitting third-party communications, except a station retransmitting Time Division Multiplex digital phone and digital data packet radio communications on the 6 m or shorter wavelength bands. Such stations must be using the American Radio Relay League, Inc. AX.25 Amateur Packet - Radio Link - Layer Protocol, Version 2.0, October 1984 (or compatible). The transmitted messages must originate at a station that is being locally or remotely controlled.

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3. Add to Section §97.305(c) as follows:  
Emission Standard (12) to the 6m phone segments.  
Emission Standard (12) to the 2m phone segment.  
Emission Standard (12) to the 1.25m phone segment.  
Emission Standard (12) to the 70cm and shorter wave-lengths, entire band segment.

4. Change Section §97.307(f)(12) as follows:  
Emissions F7E, F8E, and F9E may be transmitted.

Sampson told the FCC:

"Congestion and availability require that new methods be devised to allow a greater number of users to occupy the current spectrum. One modulation method that has the potential for providing future capability is Time Division Multiplex (TDM) using digitized voice.

"For example, using two 25 kHz channels, six operators can have full duplex communications. With the advance of technology, the number of multiplexed channels per frequency would be expected to increase due to new compression schemes, computer throughput advances, etc.

"The rules make the distinction that phone and data are two separate emission types. It appears that while phone may be digitized, it remains digitized phone, and not data. While digitized phone may be used where analog phone is currently authorized, Multiplexed digital phone is very restricted.

The current rules, 97.307(f)(12), only allows for phone TDM using analog methods from the 33cm band and up, and Independent SideBand (ISB) phone modulation, 97.3(c)(5), on many bands from 160m and shorter wavelengths, with some exceptions. Neither of these modulation methods can offer the compression or reutilization of spectrum that Frequency Modulated digitized voice using TDM can, (i.e., F7E, F8E, F9E).

\*Allowing F7E, F8E, and F9E emissions on the 6m and higher bands will produce the greatest benefit. The 33cm and higher bands would benefit from this modulation technique through the use of trunking multiple conversations without user interaction, while the use of the 6m through 70cm bands would allow the user to select both a frequency and multiplex channel in which to communicate with other operators. My intent is to allow TDM digital phone emissions on the same band segments where TDM data is now authorized i.e., 97.307(f)(8).

The digital channel access codes and compression schemes could be agreed upon by the American Radio Relay League, Inc. (ARRL), and TDM phone and data modulation be limited to this agreed protocol. This would guarantee that the emissions could be monitored. Currently the AX.25 Protocol does not contain multiplex standards but can be the appropriate

avenue for future implementation. A change to 97.109(e) as stated above would encourage research and development of proposed phone and data communications protocols.

"Without the above submitted rule change authorization, the Amateur Service will be restricted from researching new modulation methods which can have the greatest impact on solving the spectrum congestion problems that are projected for the future. I feel these changes will be beneficial to the Amateur Service, the Public, and the United States of America."

The initial reaction from FCC Personal Radio Branch chief *John Johnston/W3BE* was favorable. "Digital voice communication is something that hams ought to be working on, and we're planning to give this petition a rulemaking number." He also noted that key to the success of the N50WK concept is the development of technical standards for digital voice by the amateur community.

The Private Radio Bureau has finished its preliminary review of the Sampson petition and the assignment of the rulemaking number and acceptance of public comments are now in the hands of the FCC Secretary.

#### ***Other digital methods also available***

Another method of obtaining more capacity uses narrower emissions in a FDMA or Frequency Division Multiple Access scheme. Single-sideband as used by hams, or in the new 220-222 MHz commercial/government band, is an example of a narrow-bandwidth FDMA approach. Code-Division Multiple Access (CDMA) distinguishes between transmissions by unique digital codes with which they are intermixed. CDMA is already challenging TDMA for future-generation cellular and Personal Communications Services.

Motorola is implementing digital FDMA in its *Narrowband Advanced Mobile Phone Service* (NAMPS) system to be used in the Las Vegas cellular telephone market. Some cellular companies that are not ready to implement TDMA will use NAMPS. Motorola has also announced Astro, a version of digital FDMA for public-safety radio communications and for that part of the two-way radio dispatch market that is not as technologically sophisticated as ESMR.

- *Rich White, KA3T*, has filed an Application for Review by the full Commission of the violation notice he received for allegedly disseminating an anti-war message in early January. White believes that his record should not indicate that he violated the rules when he unknowingly retransmitted the packet message. The 68-page document was completed by his attorney.

The Radio Amateur's LICENSING HANDBOOK is for everyone who wants to know about amateur radio license tests, amateurs

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## ARRL AMENDMENT TO FCC AUTHORIZATION BILL

In August, the American Radio Relay League proposed an amendment to Congress which would allow them to offer a specialized amateur radio call sign service. The wording suggested by the League was incorporated into H.R.1674, the *Federal Communications Commission Authorization Act of 1991*. The bill would give the ARRL exclusive authority to provide the FCC with a callsign service by amending Section 4(f)(4) of the Communications Act as follows:

*"The Commission for purposes of providing specialized, radio club, and military-recreation call signs, may utilize the voluntary and uncompensated services of an incorporated association of amateur radio operators with more than 100,000 dues paying members representing all States which has a tax-exempt status under Section 501(c)(3) of the Internal Revenue Code."*

We contacted several members of the House Committee considering the FCC authorization legislation and pointed out that "While not mentioning the ARRL by name; the wording is carefully crafted to preclude all other Amateur Radio organizations from participating in the special licensing/call sign assistance program unless they have 100,000 dues-paying members." I explained that this was a very controversial provision.

I also pointed out that there were several other national-in-scope amateur radio organizations. Among them are the National Conference of VEC's, the National Amateur Radio Association, the Society of Wireless Pioneers, the Radio Club of America, the Quarter Century Wireless Association ...and others. "Each with several thousand participants." [I am a member of all of them.]

I explained how the National Conference of Volunteer Examiner Coordinators is compiling the data for the FCC (at their direction) on all Technician level amateurs who upgrade to the next higher operator class by passing a Morse code examination.

Also pointed out that "Amateur radio is presently enjoying a fairly large expansion, fueled by the arrival of a new code-free operator license class earlier this year. Nearly 5,000 new operators are joining the ham operator ranks monthly. ...With the current pressure on the federal budget and increasing interest in Amateur Radio, the government may necessarily be looking to Amateur Radio groups to provide some of the services that previously was administered by the Federal Communications Commission. We do not believe that the FCC should be precluded by law from accepting the services of other Amateur Radio organizations.

"We believe it would be in the general best interests of the government and Amateur Radio to change this amendment to simply read:

*"The Commission for purposes of providing specialized, radio club, and military-recreation call signs, may utilize the voluntary and uncompensated services of Amateur Radio organizations as determined by the Federal Communications Commission."*

## *Telephone call from Washington*

On September 25, 1991, we received the following phone call from David Leach, Legislative staffer with the House Energy and Commerce Committee. (Office of Congressman John Dingell, D-Mich.)

QUOTE: "Yesterday (September 24, 1991) the House passed the bill with the change incorporated that your group had suggested. It is worded exactly like you suggested. We were not aware that there were other groups out there that were interested in assisting. We changed the language [of the bill] once we found out that there is more than one amateur radio organization.

"I am on the staff of an outfit called the Committee on Energy and Commerce ...on the House side. I work in conjunction with Congressman John Dingell from Michigan. Your letter was well done. We looked at it and tried to think of a way we could improve on it ...and decided we couldn't and just decided to use it as is.

"The FCC Authorization Bill has now passed the House of Representatives as of yesterday afternoon (Sept. 24) about 5 o'clock. The Senate has not yet acted."

[I asked David Leach about the chances of the wording I suggested being incorporated into the final bill. Leach, by the way, is the originator of the Congressional proposal that seeks to reallocate 200 MHz of government radio spectrum to the private sector.]

"It is terrific. It will happen," he said. "Had we known what the ARRL was up to, we would not have accommodated them. They were apparently 'spitting mad' today when they looked into the Congressional Record and saw what we had done. I took a call from a guy here in town about it. 'Look, I told him we can't involve one organization ...and exclude all others.' That is nonsense! The Congress does not work that way. Once you were good enough to point out the problem we were creating ...we just went ahead and fixed it. I have to thank you ...the system does work. It is covered in the (Congressional) Record released today. It will be in most libraries. I will send you a copy." END QUOTE

WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER?

I am a currently licensed  Advanced,  Extra Class amateur radio operator and in  a  amateur radio station or operator license revoked or suspended. I do not own a sign

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We received the information and a nice letter from David Leach a few days later. It read, in part, "I am grateful for your calling the offending section to our attention. Although it was inadvertent, you correctly pointed out that it would have had the effect of excluding several organizations, which was not the intent of the Committee when this provision was adopted."

## Scanners in H.R. 1674

The final House Authorization bill extended the prohibition on 824-849 and 869-894 MHz receivers by banning certification of imports that include those bands. The prohibition is found in Section 9 (formerly Section 8) of H.R.1674, which would amend Section 302 of the Communications Act of 1934.

The following comments are from House Telecommunications Subcommittee chairman Ed Markey (D-MA) describing the bill to the House, and are recorded in the Congressional Record for September 24, 1991 (available at libraries):

"..The legislation before us today also includes an important provision that helps to safeguard the privacy of cellular communications. The *Electronic Communications Privacy Act (ECPA)* makes it illegal to intercept cellular telephone conversations, ensuring users of cellular telephones the same degree of privacy protection afforded those consumers who use traditional wire telephone service.

"Cellular telephones are considered a common carrier service and its users have an expectation and a right to privacy. Section 8 in the bill would require the FCC to deny equipment certification for receiving equipment, or scanners, that can receive cellular phone cells [sic], or that can be readily altered to receive cellular calls. By bringing the Commission's certification process in line with the ECPA, this equipment could not be used for illegal eavesdropping and interception of cellular frequencies.

"...H.R.1674 is modified by a provision concerning manufacture of scanners capable of monitoring cellular frequencies. As reported by the committee, the bill restricts the manufacture of receiving equipment, or scanners, capable of intercepting cellular frequencies.

"The legislation further extends the restrictions embodied in H.R.1674 to include scanners imported for use in the United States. This change ensures that scanners imported into the United States meet the same requirements that this legislation imposes on

domestically manufactured equipment and is consistent with the original intent."

## Appropriations and Authorization

The *Appropriations* legislation is separate from the *Authorization Bill*. One covers funding, the other approves the continuing existence of the agency. You will remember that the House approved \$133 million for the 1992 Fiscal Year which has already started. \$65 million was to be collected from spectrum users - with government, non-profit and Amateur Radio operators being exempt. Both the House and Senate have now agreed on 1992 FCC funding at \$126 million without user fees.

The Senate Commerce Committee has their version of the FCC Authorization Bill, S.1132. While user fees were contained in both the House Appropriations and Authorization bills, S.1132 does not include the user fee provision. Although the funding and agency authorization bills go hand in hand, one can be (and was) approved without the other.

According to a Commerce Committee spokesman we spoke to on Friday, it is possible the FCC Authorization bill will not be considered this year. "...they have not shown any interest in moving it anytime soon. It could be weeks ...or months. What has to be passed is the appropriations ...the authorization can be later. They do not go through in tandem. "What we are is the Commerce Committee - and we are the authorizers of the agency, we do not appropriate money. There are actually some federal agencies that have not had an authorization bill in years. It's crazy, I know. It's not what you learned in civics. Authorization bills are also used as a vehicle to make other changes."

We were also told that, at present (Oct. 11), a provision for amateur radio special call sign issuance is not included in the Senate's version of the FCC Authorization bill. "Representatives of the ARRL are proposing the following language, however:

*"(K) The Commission for purposes of providing radio-club and military recreation call signs may utilize the voluntary, uncompensated and unreimbursed services of an amateur radio organization which has tax exempt status under Section 501(c)(3) of the Internal Revenue Code."*

"We are aware of the whole debate. It appears very controversial."